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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/506,647	09/03/2004	Jodi Marie Maglich	PU4591USw	4824

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EXAMINER	
SHAFER, SHULAMITH H	
ART UNIT	PAPER NUMBER
1647	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/506,647	MAGLICH ET AL.	
	Examiner	Art Unit	
	Shulamith H. Shafer, Ph.D.	1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) *2-6* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

1) ☐ References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
2) ☐ Draftsperson's Patent Drawing Review (PTO-948)	5) ☐ Notice of Informal Patent Application
3) ☐ Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/3/04,1/31/05,7/18/06*.	6) ☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 7-05)

Detailed Action

Status of Application, Amendments, And/Or Claims

Election/Restriction:

Applicants' election, without traverse (communication of 7 December 2006, in response to requirement for restriction of 7 September 2006), of Group I, claim 1, drawn to drawn to a method of identifying test agents that alter thyroid metabolism, is acknowledged.

Claims 1-7 are pending in the instant application. Claims 2-6 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Claim(s) 1 is under consideration.

Information Disclosure Statement:

The information disclosure statement filed 3 September 2004 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because because references 3-6 were not submitted with the instant application. Therefore, these references have been lined through and not considered.

It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Objections

Claim 1 is objected to as encompassing non-elected inventions. Appropriate correction is required.

Claim Rejections

35 U.S.C. § 112, Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. § 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is an incomplete method claim. The claim is incomplete for omitting essential steps. While all of the technical details of a method need not be recited, the claims should include enough information to clearly and accurately describe the invention and how it is to be practiced. There are no method steps recited in the claim, only a statement of a goal. Therefore, it is unclear what the claim is directed to.

Claim 1 is vague and indefinite for reciting "modulate expression or activity .....". The specification discloses "for purposes of the present invention, by "modulation", "modulate", or "modulator" it is meant to regulate, adjust or alter physiological conditions or parameters associated with CAR" [paragraph 0030 of PGPUB 20050106635, the PGPUB of the instant invention]. It is unclear what type of modulation is to be detected, or how one is to go about detecting the modulation. Additionally, the claim identifies the receptor as "CAR". "CAR" is identified, in the art, as proteins of several different activities. Coyne et al. (2005. Advanced Drug Delivery Reviews 57:869-882) identify CAR as Coxsackie adenovirus receptor; Swales et al (2004. Molecular Endoc 18:1589-1598) apply the term CAR to a "constitutive activator of retinoid response", while Goodwin et al. (2004. Trends in Pharmacological Sci. 25:437-441) identify constitutive

androstane receptor as CAR. While the name itself may have some notion of the activity of the protein, there is nothing in the claim that distinctly identifies the protein. Others in the field may isolate the same protein and give it an entirely different name or give the same name to a different protein. Describing biochemical molecules by a particular name given to the protein by various workers in the field fails to distinctly identify what the protein is. Thus, "CAR" is not sufficient to identify the protein of the claimed invention, one of skill in the art would not be able to determine what molecules are encompassed.

35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Forman et al. (1998. Nature 395:612-615). Forman et al teach transfection of CV-1 cells with a reporter construct containing two copies of the RAR-β2 retinoic acid–response element, a β-galactosidase expression vector and with expression vectors for mCAR-β. Transfected cells were exposed to doses of different androgen compounds or metabolites and then assayed for reporter activity. The reference teaches that the constitutive activity of CAR-β was completely inhibited by the mammalian pheromone 5α-androst-16-en-3α-ol and by 5α-androstan-3α-ol (androstanol) (page 612, 2nd column, 3rd paragraph and figure 1). Thus, the reference teaches an assay which determines the ability of a test agent (steroid) to modulate activity of CAR. The reference does not teach the method as a method for identifying test agents that alter thyroid metabolism. However, this intended use is recited in the preamble. A preamble is generally not

accorded any patentable weight where it merely recites the purpose of a process or the intended use of a method, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Sueyoshi et al. (1999. J. Biol. Chem. 274:6043-6046). Sueyoshi et al. teach an assay comprising transfection of HepG2 cell with pCRs-mCAR, then treatment of transfected cells with TCPOBOP (test agent, a phenobarbitol (PB)-like inducer) in the presence or absence of 3α-androstenol (Figure 1). The reference teaches TCPOBOP dramatically induces CYP2B6 mRNA in 3α-androstenol-treated CAR-transfected HepG2 cells, indicating a change in activity of CAR. The reference does not teach the method as a method for identifying test agents that alter thyroid metabolism. However, this intended use is recited in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a method, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps are able to stand alone.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Wei et al. (2000. Nature 407:920-923). The reference teaches that involvement of CAR in the response to PB-like inducers was assessed by treating wild-type and $CAR^{-/-}$ animals with either PB or TCPOBOP. The induction of expression of Cyp2b10 mRNA in response to either compound in wild-type animals is completely absent in knockout animals. Thus, the reference teaches a method of identifying agents that increase activity of CAR, the activity being induction of CYP2B6 mRNA. The reference does not teach the method as a method for identifying test agents that alter thyroid metabolism. However, this intended use is recited in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the

intended use of a method, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps are able to stand alone.

Claim 1 is rejected under 35 U.S.C. 102(a) as being anticipated by Sugatani et al. (2001.Hepatology. 33:1232-1238). The reference teaches hepatic cells which express CAR endogenously (g2car-3 cells) were pretreated with a repressor of mCAR, androstenol, before induction by TCPOBOP (test agent). The UGT1A1 mRNA was decreased by treatment with androstenol and was increased in TCPOBOP-induced cells (page 1234, 1st column last paragraph, bridging 2nd column, 1st paragraph and Fig. 1b and 1c). The increase of UGT1A1 mRNA is a measure of an increase in CAR activity.

35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugatani et al. in view of Visser et al. (1993. FEBS 315:65-68). The teachings of Sugatani et al. are outlined above. Sugatani et al do not teach the assay method as a method for

identifying test agents that alter thyroid hormone metabolism. Visser et al teach that the UGT enzyme (UGT1 family of UGT enzymes) that is involved in the breakdown of bilirubin also functions in the glucuronidation and breakdown of thyroid hormone (page 67, 2nd column, last paragraph, bridging page 68, 1st paragraph).

Therefore, it would have been *prima facie* obvious to the person of ordinary skill in the art at the time the invention was made to modify the teachings of Sugatani et al and utilize the methods taught by Sugatani et al as a method for identifying test agents that alter thyroid hormone metabolism. One would be motivated to do so because Visser et al teach that the UGT enzyme (UGT1 family of UGT enzymes) has a role in the breakdown of thyroid hormone, and would of expected success because Sugatani et al. teaches a method of measuring expression of UGT1A1 mRNA.

Conclusion:

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shulamith H. Shafer, Ph.D. whose telephone number is 571-272-3332. The examiner can normally be reached on Monday through Friday, 8 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brenda Brumback can be reached on 571-272-0961. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SHS

CHRISTINE J. SAOUD
PRIMARY EXAMINER

Christine J. Saoud